事例研究

# MTシステムを用いたキーストロークによる本人認証と不正アクセス行為の識別

## —2種類の誤りがある場合のしきい値の検討—

## *Keystroke Authentication by the Mahalanobis-Taguchi System and Discrimination of Unauthorized access —A Threshold Study of Two Types of Mistakes—*

大坂　一司*　　矢野　耕也**
*Hitoshi Osaka*　　*Koya Yano*

Although unauthorized access via the Internet and other communication media has become a crime punishable under law, such crimes are increasing, and taking security countermeasures is considered important. One security measure is keystroke authentication, a biometric method that uses features of personal dynamics that are hard for another person to imitate. The advantage of this method is that simple and easy user authentication becomes possible just by adding software. However, a person's keystroke dynamics can vary greatly, making it difficult to find features and identify the person. In this study, the MT system was applied to the evaluation of keystroke dynamics in an attempt to authenticate a user by using differences between the user's keystroke patterns and other people's patterns. As a result, it became possible to identify differences in typing skills from pattern distances. The losses from false positive and false negative authentication and the break-even point of the loss function were also considered, and threshold values using a digital standardized S/N ratio were studied.

**Key words** : user authentication, biometrics, keystrokes, threshold, S/N ratio, quality engineering, Taguchi methods, standardized S/N ratio, break-even point, keystroke dynamics, fixed short text, password, spoofing

## 1. はじめに

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* 日本大学，学生会員
** 日本大学，正会員